KEEPING YOUR BEES ALIVE

President Robert Elwood asked me to talk about this subject at the October 2001 Meeting in Nashville; but I might not be alive then, so I said that I would write about it right now, so you have all summer to "solve the problem of bees dying in the winter".

What makes you think that cold weather kills bees? Good beekeepers in Alaska, Canada, Scotland, or Moscow have long, hard, -40¡ temperatures and they don't lose many bees. COLD WEATHER DOES NOT KILL HEALTHY, PROTECTED BEES! Some of the finest honey in the whole world is produced by bees in the European ALPS of Austria, and former Yugoslavia, and hopefully the hives don't get knocked down by people skiing around them. Ha Ha!

The Lord works in wondrous ways. Bears hibernate, birds fly south, horses grow heavy coats of hair, humans turn on the furnace, and healthy bees just cluster. The Great Creator has a far better program for wintering of bees than we foolish humans can devise. Bees had been found wild in the cold regions of Canada, Europe, and Asia long before Captain John Smith brought skeps of bees on sailing ships from cold England to Virginia in the early 17th century.

However, in those days there were no mites that killed bees, there were no trucks to haul bees from place to place carrying disease or pests like Small Hive Beetles from Florida to Wisconsin, and there was all kinds of natural healthy forage everywhere for bees that had not been sprayed with pesticides, and people did not live in cities like today, but lived rurally and accepted getting stung as part of their agricultural life as they picked apples, blueberries, or melons. The world has CHANGED, we humans have CHANGED, but honey bees have NOT changed. In spite of the human brilliance that has made atomic bombs, created space capsules to travel to the moon, synthesized polio vaccine, and put a computer at every ones finger tips, the advancement of human capabilities has caused many new problems for the honey bee.

No longer can the honey bee survive in the hands of the beeHAVER, because today the honey bee needs the assistance of a beeKEEPER to stay alive and reproduce. The apian of the 21st century has to insure the health of his bees by treating them with the "medicines" ONLY APPROVED by our bee scientists and treat them WHEN the scientist says "treat now, not next month", and treat with exactly the quantity of "medicine" prescribed, not how much you are willing to buy. You have to go to a motel on a cold night if your furnace runs out of fuel, but bees die if they run out of honey stores on a cold night because eating honey keeps them warm. And since it requires a lot of bees to form a nice warm cluster, are you sure that your OLD queen can lay all the eggs necessary to make a lot of young worker bees for the winter cluster? Is your queen on Social Security and living on Medicare?

Enough of all that chatter, or soon I will be telling you all about one of my great-grandfathers leaving Scotland in 1736 (40 years before Jefferson wrote the Declaration of Independence) and coming to Maryland to farm and how he kept bees to supply his table with food. Let me get serious about how to keep your bees alive.

The tracheal mite was first found in the U. S. in 1984, followed by the varroa mite in 1987. Due to lack of concern by the beekeepers and the lack of money for research to find a quick cure for our bees, both mites were soon found in almost every county (including yours in TN) of 49 of our 50 states (Hawaii is free of mites). Today, there are essentially no, or very few, feral bees left anywhere in any of the 49 states as there has been no way to kill the mites on wild bees. Just because the microscopic tracheal mite is invisible to the human eye, many beekeepers just assumed that their bees were clean of tracheal mites, and when they found their bees dead in January with a hive still full of honey stores, they blamed the cold winter. HORSEFEATHERS! The tracheal mites just strangled those old bees to death in the winter when there were no young bees to take their place. DON'T ASSUME ANYTHING! You treat for tracheal mites EVERY YEAR with MENTHOL in late AUGUST (September is too late), APICURE (formic acid), if it is put back on the market, or plain (no Terramycin) grease patties CONTINUOUSLY from June to Christmas EVERY YEAR. You can stop all this when Dr. John Skinner tells you that the tracheal mite is under control, BUT NOT UNTIL THEN!

If you are not treating to control the varroa mite with either Apistan or CheckMite strips, you don't care about the death of you bees, because the varroa mite will kill brand new bees in 2 years or less unless they are PROPERLY TREATED EVERY YEAR!. It is so easy if you pay attention to what I say about the TIME of treatment. The ONLY place that the female varroa mite lays new mite eggs is with the honey bee larva on the last day before the bees cap the cell. Therefore, when the queen bee is curtailing her egg laying in October and November and hence providing very few places for the female mites to lay their eggs, THAT IS THE CHOICE TIME TO REALLY KILL A GREAT PERCENTAGE OF MITES. Hence, install your APISTAN or CHECKMITE strips on October 1st and remove them on some warm day, over 50¡, after November 15th, but POSITIVELY REMOVE THEM SO THAT YOU DON'T CREATE RESISTANT MITES by leaving the strips in place too long. If you are as fortunate as I have been, that ONCE a year treatment has been enough to control varroa mite infestation, but it must be done EVERY YEAR>

Now, if your time schedule or your need for late season honey is such that you just can't install MENTHOL for tracheal mites before September 1st or install strips for varroa control on October 1st and remove them by Thanksgiving, you should give up trying to be a beeKEEPER and take up catching butterflies or raising pigeons. I want to IMPRESS you strongly that the timing to effectively kill both of these mites is very critical, and is "not when you get around to it". You just have to decide whether you want to HAVE bees, but replace dead bees year after to year, or whether you want to KEEP bees and have a surplus of bees that you can sell or give away every year.

As long as you are reading this SPECIAL paper for TN beekeepers, nosema disease should be mentioned. Nosema, a disease of the gut, rarely kills a colony, but it can materially weaken the bees by diarrhea so that the colony just can never get strong in the spring or early summer. (I can't work very well either when I have a case of loose bowels.) Researchers have estimated that over half of all the colonies in the U.S. have some touch of nosema disease in the spring after winter confinement. Bees that are located in an area of dampness are particularly susceptible to nosema. It is so CHEAP and easy to prevent nosema by feeding the bees 1 gallon of 2:1 sugar syrup in November that has a tablespoon (cost about $2) of Fumidil-B dissolved in it. By feeding this in the fall in heavy syrup, this syrup is stored away by the bees, who feed on it over the long winter period, and hence, are HEALTHY bees when spring arrives.

Some years ago, when sugar was cheap and package bees were only $10-$15 for 3 lbs and a queen, some beekeepers removed ALL the honey in October to sell it, killed the bees, and started fresh the following spring with packages because they did not want to leave 60-70 lbs on honey on their colonies for winter stores. Now, with the $40-$50 cost of a package of bees, that is no longer done, but the beekeeper MUST either leave 60-70 lbs. of honey on each colony or feed sugar syrup in October and November to the point of having the equivalent of 60-70 lbs. of honey for winter stores. In terms of frames of honey, the average deep frame holds about 6 pounds of honey and the average medium, 6 5/8", frame holds about 4 pounds of honey. Hence, proper winter stores for a colony in Tennessee is about 10-12 Deep frames of honey or 15-18 Medium frames. When you can buy sugar for 30¢-40¢/lb, you can make 60 lbs of heavy 2:1 sugar syrup from about 40 lbs of dry sugar at a cost of 40¢/lb = $16 to save a whole colony of bees through the entire winter rather than spend $50 for a 3 lb. package that is not going to make much honey the first year. Even a child knows the difference between $50 and $16, so that suggests that a beekeeper who loses his bees because of lack of stores is careless or stupid, or both. I make no apologies for rudeness. I am giving you FREE advice about how to keep your bees from dying - not win a popularity contest.

Maybe your brother owns a bee supply company so you can get the finest bee equipment in the world for cost, and maybe your bees are in Tennessee's most productive nectar producing country, and you have cinched up a contract to sell a lot of honey at a great price, but what happens if the queen dies during the winter? Everybody, even you, has to die sometime, but it is fairly safe to say that you are going to die before your children die because you are older. Further, your wife probably can not have as many babies as the girl in the local high school, because your wife is older. Research has clearly shown that not only can a very young queen bee lay more eggs in her first year of laying than she can during her second year, but her ability to produce the queen pheromone that prevents swarming diminishes a little more each day from the day the queen was bred. Than pray tell, why do you not requeen your colony EVERY YEAR for a mere $10 rather than take a chance on the bees swarming and losing your honey crop, or the queen dying of "old age" during the winter and you lose both the bees and honey crop!

Then are those that are satisfied with a colony just requeening itself by superseding the old queen. Research in many countries done under all kinds of situations where the bees raised a new queen to replace an old queen or dead queen has shown that the chances of getting a prolific queen by this system is not very high. Unfortunately, the beekeepers who maintain their bees in this manner really don't know the difference between their colonies and requeened colonies, because they have not had anything to compare with.

In ending, if you properly medicate your bees AT THE CORRECT TIME OF YEAR for both the tracheal and varroa mite, treat your bees in November with Fumidil-B to prevent nosema disease and the diarrhea that goes with it, have 60-70 lbs of winter stores on board by November 1st, have a new queen every year, protect your hives from north west winter winds, and move them away from any areas that might be damp or in FULL shade, you will rarely ever have dead bees and the colony will make tons of honey, and you will find the true JOYS OF BEEKEEPING.

I hope that I have helped. George W. Imirie

Beginning my 69th year of beekeeping in Maryland